

TDARS

News Letter

G3ZME
G6ZME

TELFORD AND DISTRICT AMATEUR RADIO SOCIETY

www.TDARS.org.uk

FOUNDED 1969

www.TelfordHamfest.co.uk

Issue 265

Oct/Nov 2014

www.TDARS.org.uk

Programme

www.telfordhamfest.co.uk

- October 15 Electrical Oddities—bring anything from an old radio to a Dyson
- October 16 **SLUG (Linux) meeting on “Open Source”. TCAT 6:30-9pm. Further info from Dave G0CER**
- October 18-19 **Jamboree on the Air: Wellington Scouts Group JOTA**
- October 22 Telford HamFest video—featuring Tom Read M1EYP & Son Jimmy
- October 29 Hallowe'en Social night Spook Soup and Roll
- November 5 Committee meeting + HF / VHF On the Air GX3ZME
- November 12 Dr John Moyle G1AWJ “Aspects of telecommunications during the Great War “ (note: non members tdars £2 admission fee)
- November 19 Surplus Equipment Sale. M/C Eric 'KZB
- November 26 Club Winter Projects: Introduction and update report. (see Pg 3)
- December 3 Committee meeting + HF / VHF On the Air GX3ZME
- December 10 Annual Christmas Meal. (club closed)
- December 17 Mulled wine and Mince pies. Informal evening
- December 24, 31 Club Closed.
- January 7 FORUM MEETING SPECIAL: Where from here? Open to everyone for your views and ideas of TDARS events & Activities for 2015 and onwards. 8pm.
- January 14 Committee meeting– follow up items from Open Forum. GX3ZME OTA
- January 21 Construction Evening: Practical Session—Winter Projects 7:30pm
For Amateur Radio Exam Training—enquiries to Mike G3JKX (01952 299677)
For Morse Training and Morse Proficiency Tests Martyn G3UKV or Eric M0KZB.
For Equipment Loans & Returns contact John M0JZH or Don 2E0DSN
Radio Amateur Exams- Latest: www.tdars.org.uk/html/training.html

Editorial

First of all, a big **“THANKYOU”** to all who helped at the HamFest at the end of August. The request for members to give a bit more time to the practical running of the event was heeded, and as a result, there were very few stewarding problems. I noticed that at one point, there were too many members behind the Bring and Buy stand, so for a while it freed one or two of us to cover other areas of organisation more effectively. The outcome of the HamFest was a welcome injection of funds into the tdars bank account, which pays for weekly LWVH rental and electricity charges, as well as insurance, visiting speakers, hardware purchases and so on. There were a few less visitors than last year, but costs have been controlled, and the final balance sheet issued by Jim 'UGL shows the net income continues to make the hard work worthwhile. So, put **September 6th 2015** in your diaries now.

The Committee has spent considerable time discussing TDARS membership on two fronts. The first is the thorny issue of chasing up subscriptions of those who attend frequently, but have not paid their sub dues to Jim weeks, or even months, after the AGM. Usually, it is simply an oversight by the member, and is easily put right. But money can be very tight for all sorts of reasons, and we don't want to exclude anyone if there are personal difficulties. So it is worth mentioning that subs can be paid in instalments to Jim in complete confidence—no one else is told of such arrangements. However, on the other side of the coin, committee members are aware that there are some who come quite frequently, but are not on the Members' List for the previous year, let alone the current year and this can create bad feeling. Therefore, action is being taken in two ways. When we have a visiting speaker (eg November 12) and extra costs are incurred (ie travelling expenses for the speaker), a contribution will be requested for anyone present who is not a current paid-up member of the Society. Furthermore, at the 2015 AGM, it will be proposed that following an AGM when subs are due, anyone who regularly attends but has not paid, or started to pay their subscription within, say, 3 months will be sent a written reminder, and if no payment is forthcoming, will have all rights and privileges of tdars membership, (including attendance at weekly meetings), withdrawn. The committee felt this was only fair to all parties.

The second concern of the committee has been the loss of some members who have been regarded as valued members of the Society, and who are still in the locality and active in amateur radio. In all walks of life, interests and available time ebb and flow, but it is always regretted when we lose a member for no obvious reason. So the committee have decided to hold a special Forum in the New Year (**Wed. January 7th**) when past, present or potential members can express their views and put forward ideas to make TDARS even better and stronger. I hope we shall have a really well-attended and useful meeting that night.

MIV

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TELFORD & DISTRICT AMATEUR RADIO SOCIETY

CHAIRMAN: Derek Southey G0EYX (01785 604904)

VICE-CHAIRMAN: Martyn Vincent (01952 255416)

SECRETARY: John Humphreys M0JZH (07824 737716)

TREASURER: Jim Wakenell G8UGL (01952 684173)

CURATOR : John Humphreys M0JZH (07824 737716)

NEWSLETTER EDITOR: Martyn Vincent G3UKV (01952 255416)

PUBLICITY : Dave GOCER (01630 638699 or 07971 416940, leave msg)

Committee: Simon G0UFE; Eric M0KZB; Martin 2E0TRO; Brian G6UDX; Trophies/Certs: G3UKV;

QSL Manager Paul M0PNN; Assist. Curator: Don 2E0DSN.

Little Wenlock V.H. committee Liaison officer Martin 2E0TRO

Qtc: News & Information



TDARS MEETINGS EVERY WEDNESDAY AT LITTLE WENLOCK VILLAGE HALL UNLESS INDICATED OTHERWISE ON THE FRONT PAGE PROGRAMME. ROOM BOOKED FROM 7PM - 10PM. MEETINGS USUALLY COMMENCE AT 8PM

Please note: A current membership card must be shown to borrow TDARS equipment. Please return borrowed equipment promptly .

As noted on page 2, the **2014 Telford HamFest** went remarkably smoothly, and we had lots of positive feedback, from Traders, Exhibitors and Visitors. The venue and date has already been booked for 2015 (September 6th), which will be our tenth at Enginuity, and our 38th since the very first Telford Rally in 1978. How time flies.....

The display of **vintage broadcast and communications receivers** (Sept. 17th) resulted in about 17 radios being placed on tables set up for the event: Really amazing selection!

Dave 'VZT:- Mizuho SB-2M and Trio 2100M—both 2m SSB transceivers of the 1970s.

Derek 'EYX:- Motorola phone 'brick' 800 transportable. Ten Tec Century 22 HF CW rig. Bush broadcast set AC34. Panasonic Toot-a-Loop novelty R72S MW AM receiver from Singapore which could be worn on the wrist. Derek's was flashy blue.

Martin 2E0TRO:- BC611 American phone portable transceiver—1941>. It has 5 valves, and about 130000 were produced during WW2. It covers 3.5 to 6 MHz, and has a transmit power of 350mW. See photograph left.

Also GRC9 HF Backpack transceiver (25 Lb !)

Martyn 'UKV:- Sky Baronet broadcast receiver by Vidor. 1.5v heater valves portable.

Brian 'UDX brought a selection of Icom

'bookend' transceivers, including IC202S (2m SSB/CW), IC215 (2m FM, 12 channels), IC402 (70cm SSB/CW) and IC502 (rare in UK—6m SSB/CW)

Simon 'UFE Ferranti L&M wave AC/DC set U1015—circa 1958. Also HMV (1953) model 1134, with 'magic eye' tuning.

Chris '2E0PWF Eddystone S640. 9 valve receiver ~1947-49, with main and fine ('bandspread') tuning controls and the famous Eddystone dial.

The Club AR88 set was also dragged out of the grey storage cabinet !



There will be **three TDARS projects for members to choose to build** in the next three months or so:-

- 1) Continuity tester with buzzer output (build at club)
- 2) Lightweight 7 ele 2metre SOTA style portable antenna - using lots of that very cheap 6mm solid aluminium that Paul 'PNN has sourced, plus plastic water pipe for the boom and element storage.
- 3) Hands-free kit for mobile radio, including up/down channel button selection and rig connection.

Other suggestions include a 'rig-runner' style DC multiway outlet board (G8UGL), rig 'parrot' memory machine (M0TOY), CW keyer kit (M0PNN), 3 port directional coupler 0-2GHz (G3UKV). But it was felt items 1) and 2) could be discussed and built by members on a Wednesday evening, so long as all materials and some prep. work was done beforehand. This approach was a great success earlier in the year with the dummy-load & power measurement project. Furthermore, item 3) is so ridiculously cheap (about £15) from China, and seems to work very well (a la G6UDX/M) and would enable the majority of members to have an effective and safe set up in their vehicles. So it's more of a bulk purchase exercise than construction project, but of course it will require installation to suit your tcvr, vehicle and preferences .



IMPORTANT NOTICE: In January, the first meeting of the New Year on Wed. January 7th will be an **OPEN FORUM** to which all present, past and prospective Members are invited. The Committee hopes that we will have a large turnout for a discussion entitled -
“The future of T.D.A.R.S.”

This is intended to be an opportunity for anyone interested in the hobby of amateur radio and electronics locally to put forward their suggestions as to what our Society might do in terms of activities and progress to meet the aims and objectives written in our Constitution — namely “ ***to further the well-being of amateur radio and electronics in all aspects*** ”.(para 2).

The usual 'First in the month Committee Meeting' will take place the following week (Jan.14th) so that positive suggestions from the Open Forum can be discussed by the Committee and appropriate action taken to begin to implement members' proposals for the future.

Please try to encourage everyone with an interest in TDARS to come along to the Open Forum. The meeting will be led and chaired by our Chairman, Derek Southey G0EYX.

The **results of the 2014 VHF NFD** have been published on the RSGB Radio Sport web pages. <http://www.rsgbcc.org/cgi-bin/vhfresults.pl?Contest=VHF%20NFD&year=2014>.

And the club has once again excelled itself, winning the Mix and Match section of the event.
In summary.....

Overall score 2963 pts (normalised - if we were top on all bands, score would be 4000 pts)

6m. 450 pts - 9th of 21 entries (restricted)

2m. 750 pts - 4th of 17 (restricted)

70cm. 763 pts - 3rd of 6 (low power)

23cm. 1000 pts - 1st of just 2 entries (low power.)

So section strategies paid off !

CONGRATULATIONS to all concerned - and thanks Jim 'UGL for co-ordinating the entry.

Following a couple of informal chats, it seems that the present Committee of the Little Wenlock Village Hall (LWVH) does not see the advantages of having an **Internet connection in the Hall**, despite having a fibre optic connection box in its car park! TDARS on the other hand wishes to have a good broadband connection at a reasonable speed for various purposes, not least for visiting speakers' presentations and the like. The cost of a landline connection and 'lack of need' have been quoted by LWVHC, so our committee is actively considering obtaining a club-owned stand-alone device, using the mobile broadband network, which is fairly fast and stable in the club meeting room and offers Wi-Fi for our own usage. Perhaps we should hire out such a device to other organisations who meet in the Hall, if and when purchased! A suitable Vodaphone unit (R205 PAYG mobile WiFi illustrated), plus SIM card costs about £55.



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Operating a WW2 military radio—By Martin Tromans 2E0TRO

I was asked by Richard Wilkinson, GØVXG to take my WW2 Willys jeep to St Mary's Church, Jackfield, to include it in their display "100 years then and now" theme held on 6 September.

I arrived at around 1000 hours and displayed the kit I use with the jeep when I take it to shows, including a tin hat, camouflage net, GI's jacket and an information board giving the history of the jeep.

I also displayed my US Army late war GRC 9 radio set (a combined radio transmitter and receiver) which provides Voice and CW. This set can be either vehicle mounted with a gn-58 generator and 15 foot whip antenna or used in the field with a hand generator and a long-wire antenna.

CW stationary 75 miles, moving 30 miles

It was nice to know a 70 year old radio still works and on 80 metres AM.

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*"Just read QST for September, and under Hints & Kinks" is an item about APRS (Automatic Packet Reporting System), with full transceive, using an 'app' called **"APRSdroid"**.*

Dave replied:

Having connected up the radio to your tablet or phone might also open the potential to use it for other data-modes, perhaps decode other signals that your radio is able to receive. (people send SSTV on 2m FM).

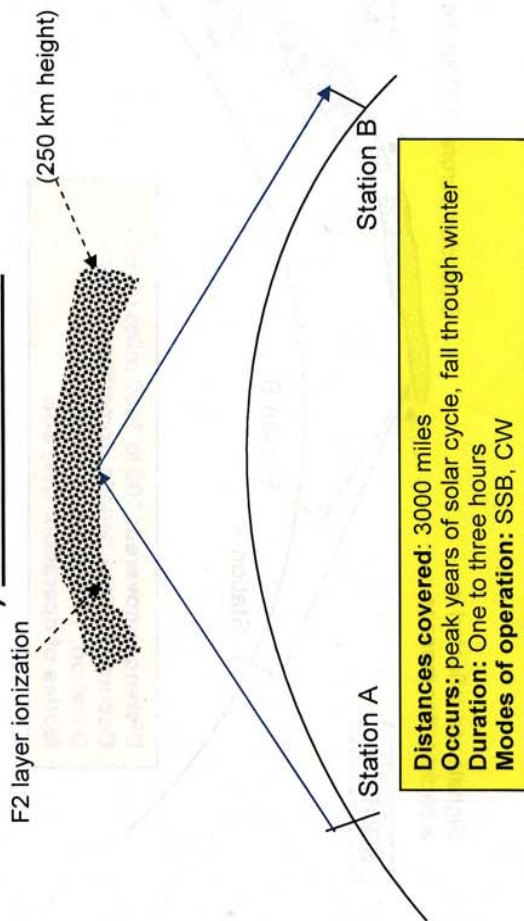
Others heard me and passed the data to the internet for the whole world to see as well. At home I have an old 2m radio and a TNC and a small pc which takes the APRS data and maps it and feeds it into the internet feed. I can see local RF data with internet data on the map. My home call was G0CER my mobile call was G0CER-3 (I really should be using G0CER-9) My setup.. isn't .. at the moment.

The thing that holds back APRS in the UK is the licencing restrictions - in the US for example a cycle race over a mountain could use APRS to track all of the cyclists by each of them having a tiny tracker system TXing APRS on 2m and they could be tracked for safety reason - but in the UK each cyclist would have to be licenced. (the high altitude balloon experimenter ended up getting licenced).

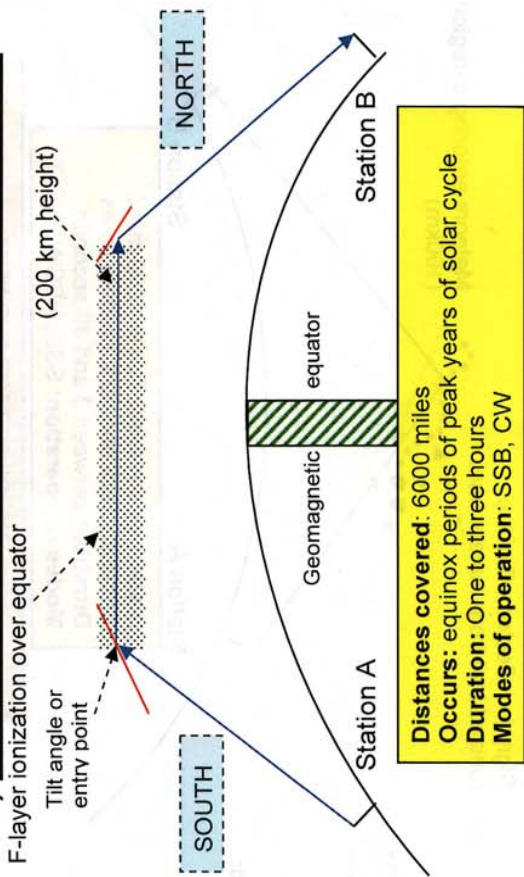
A UK version of the above would be, I believe, RAYNET use APRS in sponsored walks by having stations at check points using very simple messaging capability to report back data to show how many have passed by - (the station automatically sends where it is every time) - so control can have information on walkers and if the correct amount have passed by that checkpoint - if not, there is a problem. It is probably one of the options they have alongside voice.

Continued >>>>>>

5) F2 PROPAGATION

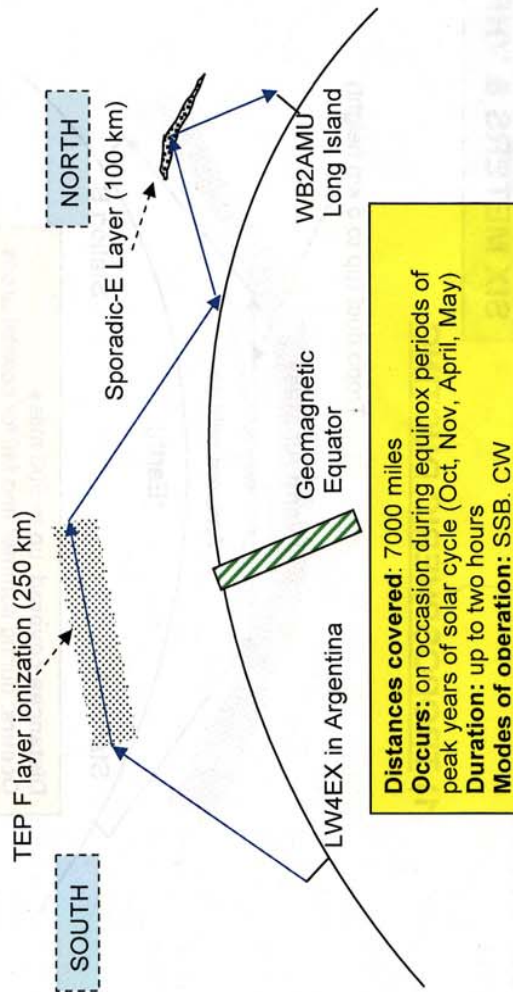


6) TRANSEQUATORIAL PROPAGATION (TEP)



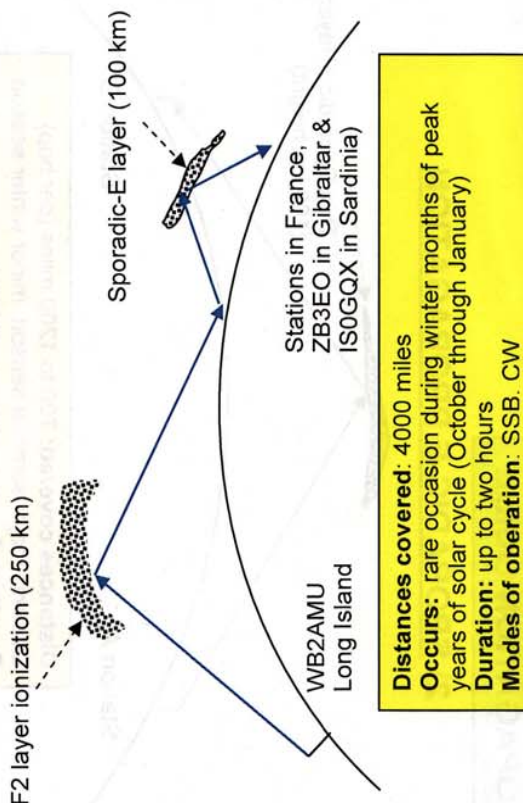
7) COMBINED TEP AND Es ON 50 MHz

Event: 10/6/02 @ 2100 UTC; Northeast US into Argentina



8) COMBINED F2 AND Es ON 50 MHz

Event: 1/3/ 02 @1700 UTC; Northeast US into Southern Europe



JOTA 18th – 19th October 2014 —by John M0JZH

It is that time of year again when we ask for help with the **JOTA station** in Wellington.
For those of you who have not come down to help, the 2nd Wellington Scout Hut address is:

2nd Wellington Scout HQ
Lychgate Walk
Wellington
Telford TF1 3HA

Help in getting the station up and running, some assistance during the weekend would be good too, and also help in dismantling the station at the end of it all.

CW operators please let me know if you can come along and give some help, and when you will be available – I would like to schedule you through the weekend so please let me know when you are available.

The plan this year is to have one of the mobile towers up as the support for the 2m FM station, and also for the “centre” of the home brewed off-centre dipole that was built last year, cut for 80m. We also plan to have a full size delta loop for 20m as the basis for a third station.

With the three antennas we hope to be working voice 2m FM, voice HF and also PSK31 on HF.

All help will be gratefully received, just let me know if you are coming and for what length of time you hope to be around, it would be good to let our hosts know of your imminent arrival.

Thank you

John

MOJZH



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Sunday 28th September on Granville Country Park.
The testing phase for next year's leapfrog portable.

The radio / antenna combination worked fine and we have the basis of our portable station to put together for next year's leapfrog portable events.

Our 50w and Leisure battery combination worked almost 4 hours without issue, more details to follow; however, if you are interested in being part of this newish concept in portable events, and wish to know more, please come over and have a chat with either myself or Simon G0UFE.

Station – 88Ah battery

Icom IC706 Mk2G

Full Size Delta Loop for 20m

Auto ATU for the other bands.

RESULTS:

26 stations

16 Countries

Longest DX – Virginia USA 3700 miles.

John MOJZH

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Icom 'Bookshelf' Transceivers by Brian G6UDX

Following the club meeting of 17 September Martyn ('UKV) has asked me to pen a few words about these radios. The following as a brief amalgam of what I've learned about them from various sources. I'd be delighted if anyone can add further information or correct any unintentional errors I have made in the following.

IC202 Series

The first in the 2mtr series was the IC202 was introduced in about 1976. Not quite a hand-held nor a mobile these are powered from internal batteries or an external 12 volt supply. The radio is a USB SSB/CW rig operating on the two-metre band with a power output of approximately 3 watts PEP. It can be tuned within the band in a number of 200 kHz segments by pulling a crystal oscillator using the tuning capacitor.

Crystals for two of the four blocks of 200kHz are factory supplied covering 144.0 to 144.2 and 144.2 to 144.4 MHz. Two additional crystals may be retro-fitted to extend the range of operation. Each of these crystals oscillate around 15Mhz followed by two frequency tripler stages according to the following table:

Centre Frequency	Crystal Frequency	Range
144.500Mhz	14.83928Mhz	144.400 - 144.600
144.700Mhz	14.91550Mhz	144.600 - 144.800
144.900Mhz	14.93772Mhz	144.800 -145.000
145.900Mhz	15.04883Mhz	145.800 - 146.000

A year or two later this was superseded by an updated model known as the IC202E which incorporated a few minor improvements.

The IC202 was superseded by the IC202S in around 1980. This incorporated a number of further improvements. Most noticeable was the inclusion of LSB, primarily for the benefit of satellite enthusiasts.

Because of their simple no-nonsense design, quite a few of these rigs remain in use as prime-movers for micro-wavers and a their internal batteries make them useful to SOTA aficionados despite their age.

Rigs of this simplicity attracted the modifiers; some good, some not so good. The most commonly found was probably the fitting of a 3SK88 RF amp. Perhaps the most radical was the G4DHF modification to provide a digital frequency readout.

IC402

Introduced in the early 1980s this is an identically styled SSB/CW radio to the IC202S covering 432.000Mhz – 432.400Mhz at approximately 3 watts PEP as factory issue. This 70cms variant incorporated LSB along with USB from the very start and no successor was produced.

Again, two additional crystals may be retro-fitted to extend its range. The crystal oscillator operating in overtone mode being followed by two tripler stages to achieve the UHF frequencies.

After-market front end modifications included the fitting of a 3SK97 which some amateurs claimed moved the receiver into the EME sensitivity range.

Very rarely seen outside of the Pacific region is the IC-302 (Japanese version) derivative which covers 430.000-430.400Mhz straight from the factory. Although otherwise identical to the IC402 these were silk screened IC302 on the front panel.

IC502

Introduced in 1975 this transceiver shares the style of its higher frequency brethren but has continuous coverage of a 2Mhz range courtesy of a capacitor tuned VFO. This single conversion radio is generally considered to have a very sensitive receiver with no bells and whistles (literally). Unlike some more modern rigs, when fully extended the built-in telescopic antenna is truly resonant which optimises the available performance. Its only areas of bad manners is its poor VFO stability, not conducive to

These 6mtr radios are very rare in the UK and much of Europe as they were discontinued before we had a 50Mhz allocation. Although all of these rigs are usable on CW, this involves manually switching from transmit to receive and back again, which can be a little annoying if you're used to full break-in. All of the above radios share a very uncommon power connector that resemble a miniature CEE/IEC connector.

Although of similar appearance the final rig in the bookshelf line-up is different in a number of ways. It is the only FM transceiver and unlike its brothers has a 5.5/2.1mm concentric power connector. The main front rotary control is a 12 position rotary switch instead of a VXCO/VFO control.

Users of these venerable rigs will find an increasing need to add CTCSS to access many of today's repeaters. With care, space can be found inside these rigs to fit such a module without the need to use the battery area.

To increase the versatility of these radios Icom produced a comprehensive range of accessories. These often attract unexpectedly high prices on Internet auctions sites from collectors of these vintage radios.



IC-3PS power supply which include space for one of the following linear amplifiers.

- IC-20L (10 watt 2mtr linear for use with members of the IC202/IC215 family)
- IC-30L (10 watt 70cm linear for use with members of the IC402 family)
- IC-50L (10 watt 6mtr linear for use with members of the IC502 family)
- IC-SM2 electret desk microphone with pre-amplifier
- BC-20 internal battery charger.



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Rome burns while Mike fiddles



A man in a blue jacket is crouching on a grassy hillside, possibly setting up equipment. In the background, a satellite truck is parked on the crest of the hill, and another person is visible near a tripod. The sky is blue with some clouds.

We have not been out on one of our regular portable events now for some time, and during a debriefing session (ok a pint after the meeting) one evening, portable events came up in conversation. And as part of this one of the group suggested working on the Iron Bridge, however we came to think that this would not be easily be achieved and safely due to the footfall on the bridge itself – we might even get kicked off!! The conversation then changed into how we could best avoid this, and a strategy of set up – operate for a little time – then run..... Then where to? Now we had the beginnings of a plan.

If we could adapt our style to be extremely portable, allowing us to set up and operate within minutes, as against for an example the standard portable station that takes us upto an hour to set up. So how to about this?

OK First starting with the power supply, a generator is too big and bulky to work this style, so we have to be looking at batteries, or a leisure battery at least. Because our power is now a limited resource for our prospective station, then in order to get some workable time out of our station, we need to be looking at lowering our output power – 50w? We will see how we get on with this on our trial run on the 28th September, it might be that we come down to 25w; for now we will play it by ear. Well that is the power side of things sorted, but in order to work with this style of setting up and down in such a short space of time we need to have an antenna that will allow for us to work like this. Nothing like the G5RV that we have used inverted V before this is too time consuming, we need to look at this. We could look at a telescopic vertical – this will make it harder for the inter G contacts, but should help with longer distance contacts, or a delta loop. This bit we are still looking at. Shelter; a tent takes too long and is too bulky – a tarp will do the job, not as comfortable but will keep the rain off. Setting up the station, this needs to be at least part done before we set off. Simon G0UFE, always full of bright ideas, came up with one. He has a 'granny' shopping trolley (don't ask me why??) that he is looking to cannibalise into what will essentially be a mobile shack, I think that it will work.

This stations first outing will be on Sunday 28th September (**see article page 8—Ed**) where just two or three of us will take it out and see how it will work, just for 4 hours. Not a portable event in the normal way of working, but it will be the precursor to a future event.

Where are we going with this station? Well, if we are restricted to just 4 hours of operating because of the power supply (still to be determined) then we ideally could do with a second battery to carry it on; however if we could have a second station kitted out in a very similar fashion, what if this station was somewhere else that we could hand over the club call-sign to? what if we could operate for a couple of hours at a time, hand over, then two hours later take the call-sign back at a different location, before handing it over again for the final two hours a fourth location? Four locations, one call sign being handed over like a baton, ***leapfrog portable !***

Will you join us?

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Thanks for Newsletter input this time from John M0JZH, Dave G0CER, Mike G3JKX, Brian G6UDX, Martin 2E0TRO, Dave G8VZT.

Next edition mid December. Keep the I/P coming please!

Editor's Note: Final page, if you read this far. An awful sexist article which was handed to me by a Club Member. Please send any letters of protest to someone else.

Woman defies advice and enters Maplins without a man



A 46-year-old woman from Brighton has been found tired and dehydrated in a branch of Maplins, where she had been trapped since wandering in on Saturday afternoon and asking for help to choose an external hard drive.

Despite a prominent warning sign at the entrance to the store, housewife Ruth Clarke has admitted she ignored the advice and entered the store unaccompanied by a man. 'I'd spoken to my husband the night before and so I thought I knew what we wanted,' she said. 'But after talking to a few of the assistants, I quickly realised I was way, way out of my depth.'

Manager Wayne Brown recalls the moment Mrs Clarke entered the store. 'The lads clocked her as soon as she came in. As she wandered among the circuit boards and cables she looked lost and vulnerable, like Bambi in hunting season. But at Maplins we take customer service very seriously, so when it became clear she didn't have a clue what she was talking about, we made arrangements to keep the store open as long as it took to go through every single product we sold and establish if she needed one.'

First to offer assistance was Alan Martin, who talked through the range of hard drives available and quickly established the most suitable for her needs. However, after talking about the Clarke's existing network infrastructure it became clear that their primary solenoids and meta-transitional GUI interfaces were woefully below the required spec. His colleague James McManus then recommended some additional RAM, a USB desk fan and a tool for stripping cables, before Brown himself added a load-balancing router, an Ethernet cable large enough to support 3-hour films and a box of firewalls.

'It's been a difficult journey,' said an exhausted Mrs Clarke. 'But credit must go to the guys here, who really know their stuff. If it wasn't for them, God knows what rubbish I'd have ended up buying!'

The Brighton branch of Maplins is currently closed awaiting a delivery of replacement stock.